

# Work Order ID 62952

Thursday, October 14, 2010 12:37:20 PM



Page 1

Item ID: D3137-3

Accept



Setup Start



Revision ID:

Stop



Item Name: Guide

Start Date: 10/14/2010 Start Qty: 10.00



Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan:

*[Signature]*

Date: 10/10/14

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3137	Rev F								

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blanks.Blank size: 1.250" x .750" x .950" long

*SL 10/11/16*

*(15)*

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1.

1-Machine as per Folio FA242 & Dwg D3137□2-Deburr

*SL 10/11/17*

*10*

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

*SL 10/11/17*

*10*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 62952**

Thursday, October 14, 2010 12:37:20 PM

Page 2

Item ID: D3137-3

Accept

Setup Start

Revision ID:

Stop

Item Name: Guide

Start Date: 10/14/2010 Start Qty: 10.00

Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 10.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

amr 10/16/17

10 0

Quality Control

140

Identify as per dwg &amp; Stock Location:

0.00



Packaging

Memo

0.00

Packaging

MF 10-11-17

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/11/17

MF 10-11-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries


Thursday, October 14, 2010 12:37:24 PM

Page 1

[illegible][illegible]

**Required Qty: 10.00**

**Comments:** IPP Rev:A 02.05.29 New Issue NG  
IPP Rev:B 08-05-23 revE as per dwg DD verified by:EC  
IPP Rev c 08.07.03 ECN1207 EC verified by DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRLNB0.75X1.250		Purchased	No			100	f	30.4224	0.0791	0.832632			
													
Delrin Bar													
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						MAT050	30.4224						
						14535	30.4224						

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 62932
<b>Description:</b> Guide		<b>Part Number:</b> D3137-3
<b>Inspection Dwg:</b> D3137	<b>Rev:</b> F	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.175	+/-0.010	.177	/		Vern	SD-9
Ø0.257	+0.005/-0.000	Ø.257	/			
Ø0.65 x 100°	+/-0.030	Ø.65x100°	/			
0.425	+/-0.010	.425	/			
0.550	+/-0.010	.550	/			
1.100	+/-0.010	1.103	/			
0.470	+/-0.010	.471	/			
0.850	+/-0.010	.853	/			
0.143	+/-0.010	.144	/			

<b>Measured by:</b> SD	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 10/11/17	<b>Date:</b> 10/11/17	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.27	New Issue	KJ/RF	
B	04.11.12	0.175 was 0.145 & Ø0.65 x 100° was Ø0.75 x 100°	KJ/JLM	
C	06.03.15	Dwg Rev updated	KJ/JLM	
D	08.12.02	Dwg Rev updated	KJ/DD	[Signature]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

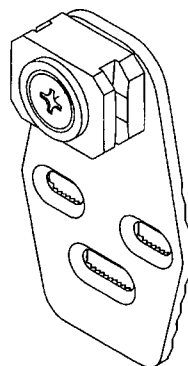
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

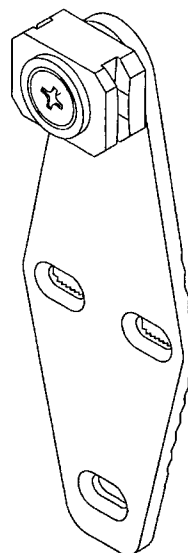
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

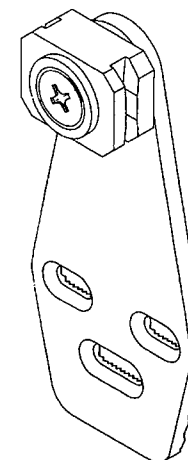




**D3137-041 BRACKET ASSEMBLY**



**D3137-043 BRACKET ASSEMBLY**



**D3137-045 BRACKET ASSEMBLY**

UN COPY  
SUBMIT  
NO. 42952  
2/10-10-14

F	REDRAWN & REFORMATTED IN SOLIDWORKS. SHEET 3 ZONE A 5 DIM 2.36 WAS 2.48, ZONE A 4 0.480 DIM WAS 0.605, ZONE A 8 0.67 DIM WAS 0.78, ZONE B 5 4.850 DIM WAS 4.975 & ZONE B 8 5.28 DIM WAS 5.41. REASON: PART TRIMMED DUE TO INTERFERENCE WITH EXECUTIVE INTERIOR.	AJS	08.05.30
E	ADD -045	RF	05.11.23
D	RE-DESIGN D3137-5; CHANGE DIMS	DS	04.11.03
C	ADD -043	DS	03.08.15
B	ADD RIDGES; ADD MATERIAL PROP	DS	03.01.16
A	NEW ISSUE	DS	02.04.17
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3137	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		BRACKET ASSEMBLY	NTS
DATE	08.05.30	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

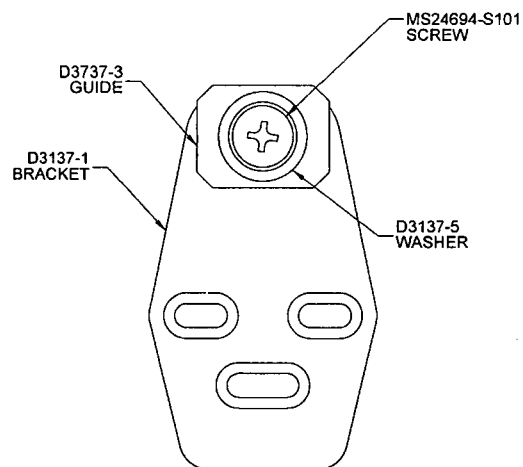
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

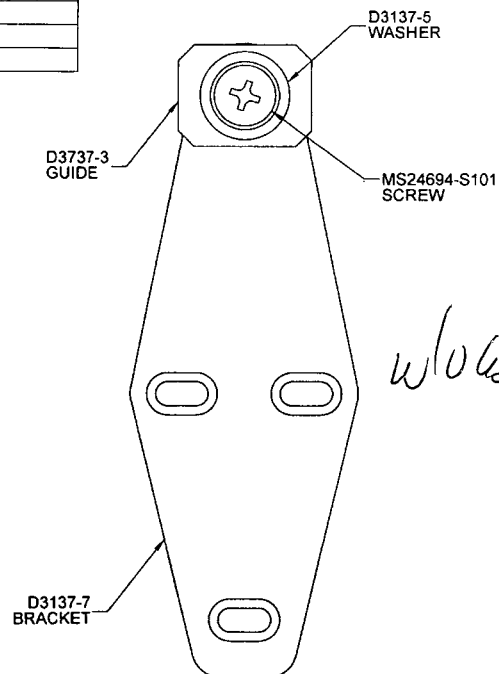
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

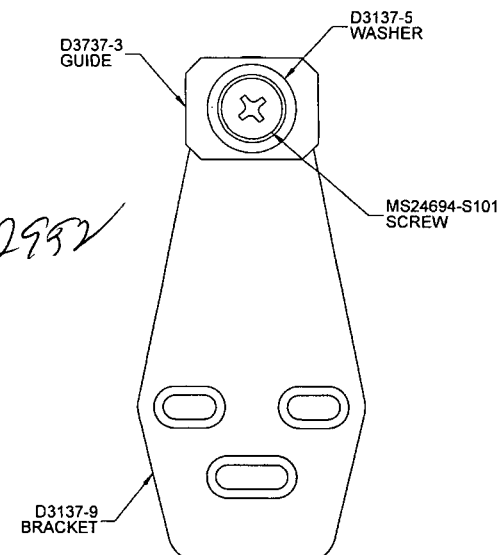
QTY. -041	QTY. -043	QTY. -045	PART NUMBER	DESCRIPTION
X			D3137-041	BRACKET ASSEMBLY
	X		D3137-043	BRACKET ASSEMBLY
		X	D3137-045	BRACKET ASSEMBLY
1			D3137-1	BRACKET
1	1	1	D3137-3	GUIDE
1	1	1	D3137-5	WASHER
	1		D3137-7	BRACKET
		1	D3137-9	BRACKET
1	1	1	MS24694-S101	SCREW



**D3137-041 BRACKET ASSEMBLY**



**D3137-043 BRACKET ASSEMBLY**



**D3137-045 BRACKET ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.18 lbs -041  
: 0.32 lbs -043  
: 0.27 lbs -045

**RELEASED**  
08.06.26.18

DESIGN	DS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO. <b>D3137</b>	REV. F
MFG. APPR.			SHEET 2 OF 5
APPROVED		TITLE <b>BRACKET ASSEMBLY</b>	SCALE NTS
DE APPR.		COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.05.30		

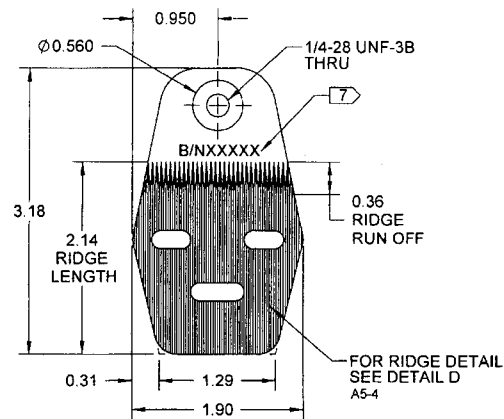
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

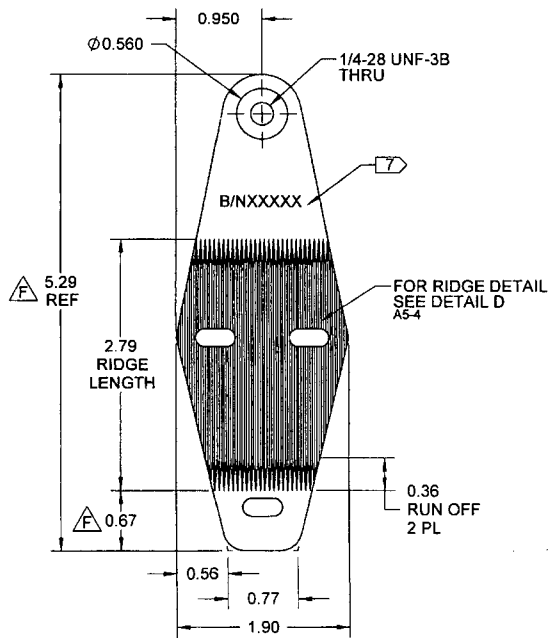
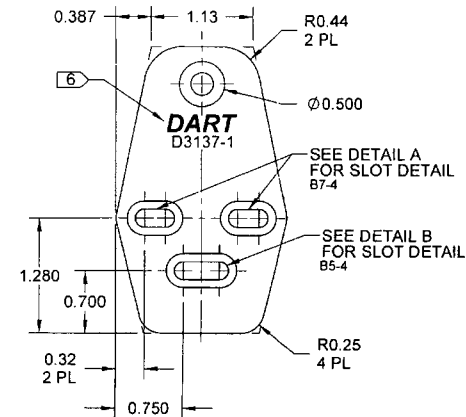
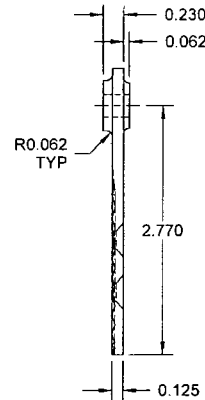
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

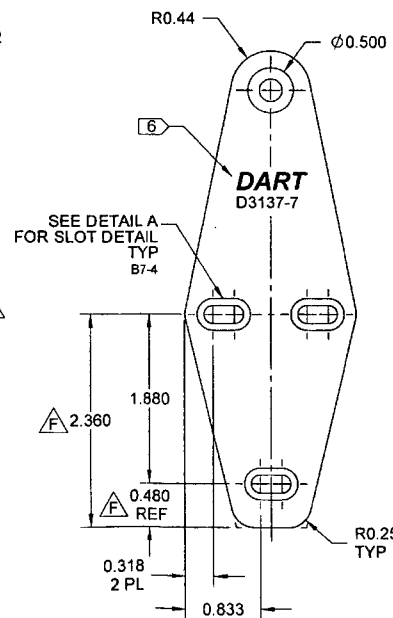
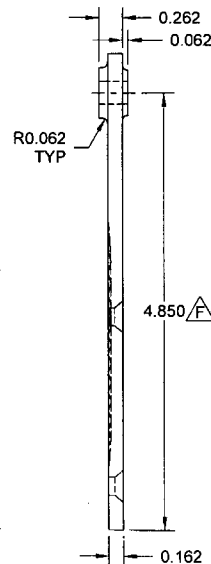
**NOTE:** Date & initial all entries



**D3137-1 BRACKET**



**D3137-7 BRACKET**



**NOTES:**

- 1) MATERIAL: -1 & -7  
17-4PH STAINLESS STEEL  
PER AMS 5604 OR 5643  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi  
PER DART SPEC. M17-4-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: ENGRAVE DART LOGO USING 0.20 HIGH LETTERS & P/N WITH USING .15 HIGH LETTERS TO A MAX. DEPTH OF 0.010.
- 7) SCRIBE WITH DART B/N USING VIBRATING STYLUS
- 8) WEIGHT: SEE ASSEMBLED WEIGHT ON SHEET 2
- 9) -1 REPLACES PREMIER P/N B30-23000-105/-

**RELEASED**  
OK 06.16.14

DESIGN	DS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. <b>D3137</b>	REV. F
MFG. APPR.		SHEET 3 OF 5	
APPROVED		TITLE <b>BRACKET ASSEMBLY</b>	SCALE
DE APPR.		NTS	
DATE	08.05.30	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

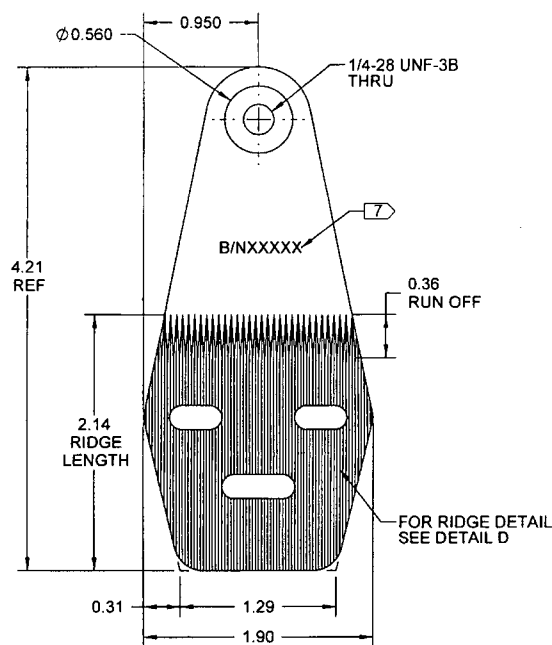
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

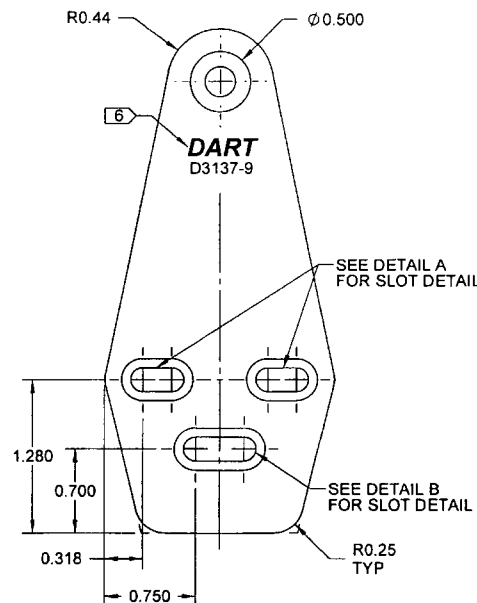
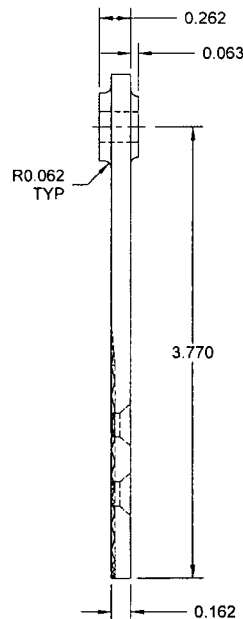
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

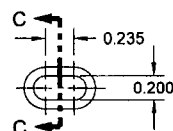
**NOTE:** Date & initial all entries



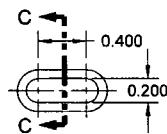
**D3137-9 BRACKET**



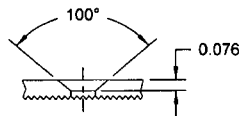
*W1042952*



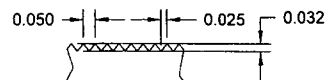
**DETAIL A  
(SLOT DETAIL)**



**DETAIL B  
(SLOT DETAIL)**






**SECTION C-C  
(SLOT DETAIL)**



**DETAIL D  
SCALE 2X  
(TYPICAL RIDGE DETAIL)**

**NOTES:**

- 1) MATERIAL: 17-4PH STAINLESS STEEL  
PER AMS 5604 OR 5643  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi  
PER DART SPEC. M17-4-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: ENGRAVE DART LOGO USING 0.20 HIGH LETTERS & P/N WITH USING .15 HIGH LETTERS TO A MAX. DEPTH OF 0.010.
- 7) SCRIBE WITH DART B/N USING VIBRATING STYLUS
- 8) WEIGHT: SEE ASSEMBLED WEIGHT ON SHEET 2
- 9) REPLACES PREMIER P/N B30-23000-105/-106

DESIGN	DS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		<b>D3137</b>	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		<b>BRACKET ASSEMBLY</b>	NTS
DATE	08.05.30	COPYRIGHT © 2002 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

**RELEASED**  
*08-06-26*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

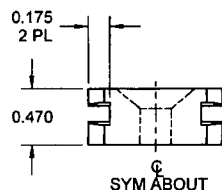
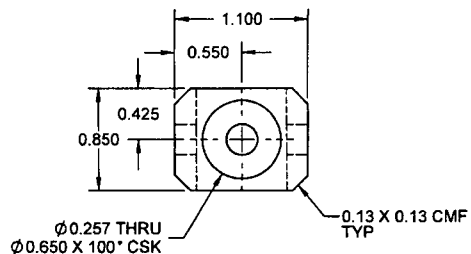
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

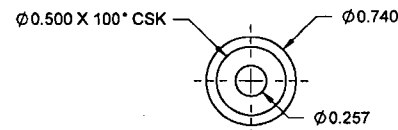
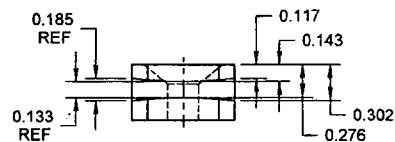
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

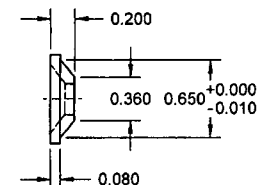




**D3137-3 GUIDE**



**D3137-5 WASHER**



*w/6 62952*

**NOTES:**

- 1) MATERIAL: -3  
DELIN II 150E OR ACETRON GP ACETAL, BAR  
(REF DART SPEC M-DELIN-B)  
-5  
6061-T6 (OR 6061-T651/ T6510/ T6511/ T62) ALUMINUM BAR  
PER-AMS-QQ-A-225/8 (OR AMS 4117/ 4128/ 4145/ 4116)  
OR PER-QQ-A-200/8 (OR AMS 4160)  
REF. DART SPEC M6061T6R
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 (-5 ONLY)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: SEE ASSEMBLED WEIGHT ON SHEET 2
- 8) -3 REPLACES PREMIER P/N B30-2300-207  
-5 REPLACES PREMIER P/N B30-2300-209

**RELEASED**  
18.07.00.10

DESIGN	DS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>[Signature]</i>	D3137	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BRACKET ASSEMBLY	NTS
DATE	08.05.30	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries